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## The Classical Amputations of the Foot and Ankle

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There are four amputations of the foot and ankle that may be termed classical. These are the Lisfranc, Pirogoff, Chopart and Syme. Each one of these has been named for the surgeon who first described the operation. The Lisfranc is a disarticulation of the foot through the tarso-metatarsal joints, the Chopart a medio-tarsal disarticulation, the Pirogoff an osteoplastic amputation in which the sawed off posterior portion of the os calcis is turned forward and upward against the tibia and fibula from which the malleoli have been removed, and the Syme an amputation through the malleoli just above the articular surface with the heel pad preserved for a bearing surface.

It is the object of this paper to briefly discuss the relative merits of these four amputations from the standpoint of function and artificial limb fitting.

The Lisfranc, when properly performed and sound healing obtained, is the most satisfactory operation of the four. With it a patient can have a block of wood, felt or rubber fitted in the shoe with hardly a perceptible deformity and function little less than normal for most occupations. Amputations of the foot anterior to the tarso-metatarsal articulations are superior to the Lisfranc because the farther forward the amputation the better the foot arches are maintained and the general balance of the foot preserved. Any good foot amputation can be satisfactorily fitted provided the site of amputation has not destroyed the tendon insertions of the tibiales and peronei muscles. It is necessary that the foot retain these tendon insertions to prevent its being drawn into the equinus position by the strong posterior leg muscles.

The Chopart is the least satisfactory of the four amputations. The powerful calf muscles tend to draw the two tarsal bones backward and upward, making a prominent heel and a tilting downward of the scar, which often becomes tender. An un-

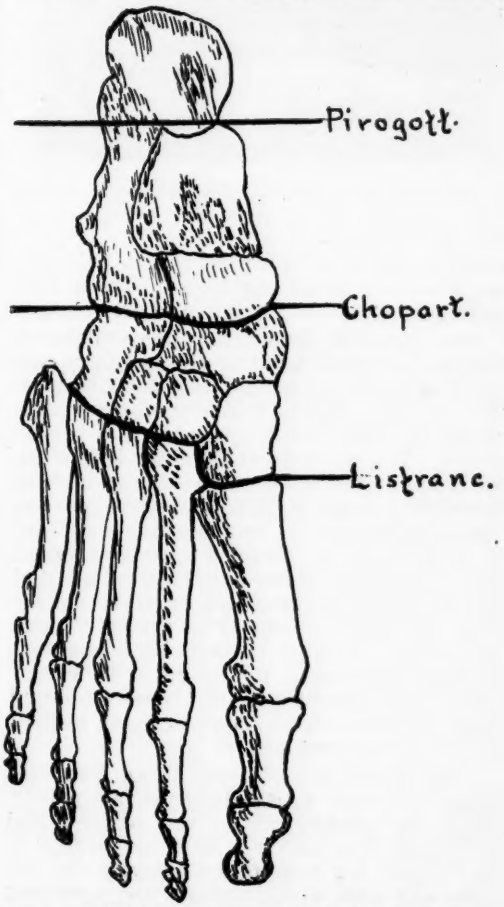


FIG. 1.—Skeletal sites of amputation of Pirogoff, Chopart and Lisfranc.

gainly apparatus, which is difficult to fit and more difficult to wear, is necessary for satisfactory locomotion. The loss of the anterior muscle insertions destroys the balance of the foot by leaving the unopposed calf muscles to constantly increase deformity. Many patients with Chopart amputations, after trying various types of artificial feet, return to the surgeon for reamputation. One well known artificial limb maker has told me that 75 per cent of foot amputations sooner or later submit to reamputation. Division of the tendo-

FIG. 2.—Chopart Amputation showing os calcis drawn back by contracture of calf muscles.

achilles, either at the time of the primary operation or later, may be of value but usually is effective for but a short time.

The Pirogoff amputation may make a very good weight bearing stump but it can never make a stump that is satisfactory to fit. It is too long to enable the limb maker to put an ankle joint below the end of the stump. If a movable ankle is made it must be fitted to the sides of the stump, giving the foot a large ungainly appearance. A second objection to this operation is that it is difficult to perform and get sound union between the os calcis fragment and the tibia. Often nonunion or malunion results. Unless a Pirogoff is perfectly done and perfect healing of both bone and soft tissues is obtained, the stump will be tender. The end of the stump is more pointed than the Syme and does not make such a good bearing surface.

The Syme amputation, when properly done, is a very satisfactory operation both from the standpoint of the patient and artificial limb maker. It is preferable to the higher leg amputation because the patient can walk about without any artificial appliance. This obviously reduces his disability. He can get up at night without his artificial limb. When the limb is broken it is not necessary for him to resort to crutches. The advantages over the Pirogoff and Chopart are that it makes a good end-bearing stump; it can be fitted with an ankle joint; it is much easier to fit; and last, it has all of the advantages of the Pirogoff and Chopart with none of their disadvantages. But the Syme amputation may not always be free from difficulties. If the heel flap is left too long there is apt to result a wobbly tender stump. The flap may become displaced and tenderness result. If the flap is not properly shaped at operation the stump may be bulbous and difficult to fit. If proper care is not used in high division of the nerves, neuromata may form at points where pressure may make them tender. The circulation may be interfered with to such an extent that there may be sloughing of the flap.

I have sent a questionnaire to twelve of the leading artificial limb makers of the United States asking their opinions of the Syme, Chopart and Pirogoff amputations. Nine of these have replied. One states that the Syme and Pirogoff are equally easy to fit. The other eight are all emphatic in saying that the Syme is easiest to fit and decidedly the choice between the three. One maker states that he has a circular letter that he mails to all applicants having partial foot amputations saying that his firm or any other limb company cannot furnish a comfortable and satisfactory artificial appliance for such amputations. It is his experience that when a partial foot amputation is fitted by a firm it is the last order received from that locality. These patients try one artificial foot substitute after another from various makers without success and fin-

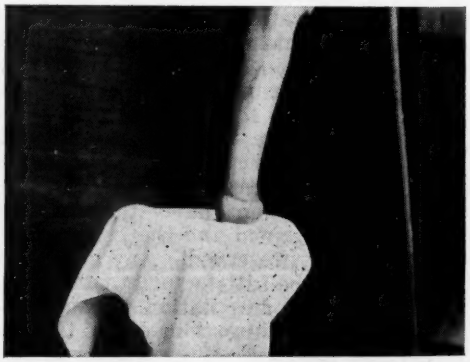

FIG. 3.—Same as Fig. 2 converted into a Syme because of tenderness and disability as result of deformity.

ally the vast majority of them resort to reamputation. Irwin[1] says "the ideal performance of this amputation (Syme) leaves a stump which is, from the point of view of function, as nearly as possible perfect." He has shown in a very instructive diagram that the capacity for work is much greater for the Syme than the Chopart or even the Lisfranc.

CONCLUSIONS.

1. The Chopart and Pirogoff amputations should be abandoned as definitive operations. The Syme has all of the advantages of them both without any of their objectionable features.
2. The Lisfranc amputation, when properly performed, is satisfactory both from functional and fitting standpoints.
3. The amputation of choice of foot or ankle proximal to the Lisfranc is the Syme.

[1]Irwin—British Med. Jour., Feb. 22, 1919, No. 3034, p. 212.

## Non-Tubercular Joints in Children

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My reason for writing on this subject at this time is to call attention, in a general way, to the observations that are being made in joint conditions in children.

About twelve years ago it was determined that scoliosis, the idiopathic type, occurred about the time of puberty, and was the result of softening of the bodies of the vertebræ. It is now thought that this change is produced by something being taken away from the bones to be stored up in the sexual glands. Whether or not this is true remains to be proven, for the condition may be due to a failure of proper ossification. Occasionally cases are seen in which the attitude of the spine is a posterior deformity instead of a lateral one and in all probability represents the same condition of the bones.

A year or so later all chronic conditions of joints, other than the spine, with evident bony changes, were diagnosed as tubercular and so treated. Some of these cases made very marvelous recoveries, while others went on and developed the usual crippling deformities of tuberculosis although treated by the same method. An investigation of some of these cases proved that the condition was often due to an improper development of the bone and not a joint disease at all, so that the so-called Perthes' disease has become an entity, and is now quite frequently recognized. This condition is probably not a disease at all but represents a failure of the cartilaginous areas in the head and neck of the femur to harden or ossify at the proper time, with the result that they flatten out under the increased weight and strain they are called upon to bear.

That such a condition may be found at other joints is just being recognized, and now one occasionally sees a knee joint in which the bony change is analogous to that seen in cases of idiopathic scoliosis, and Perthes' hips. All of these conditions are characterized by changes of the cancellous structure of the bone resulting in softening. The joints are not involved at all, except as they are found to conform to the structural bony change. This fact makes the differentiation of these conditions from diseased joints rather easy by X-ray, although it may be necessary to delay in diagnosing certain early cases. As a rule the bony change gives rise to the symptoms and sufficient change will have occurred to make the diagnosis possible. An interesting feature of these cases is that the change usually comes on rather suddenly and often no definite symptoms are complained of, and it is the deformity that first attracts attention.

It is important that these cases be recognized early in order that they may be relieved of weight-bearing and their bones thereby given a chance to harden before marked deformity has occurred.

Infectious joints, secondary to infections elsewhere, such as tonsils or teeth, simulate tuberculosis very closely, and it is often difficult to differentiate between them. However, the X-ray can, as a rule, be relied upon to show no bony change in these conditions, whereas the bone is involved in tubercular processes. Early correct diagnosis in these cases will save the patients a long tedious treatment that will in the end be of no benefit to them, for, if the source of infection is removed, the joint symptoms disappear.

One other condition that I would like to mention is syphilis of the joints. In my opinion syphilis more closely simulates tuberculosis than any other disease. It is not uncommon for a case to be treated for two or three years as a T. B. joint and then found to be syphilis. It is a rather humiliating experience that is constantly occurring. The X-ray I think offers us a chance to make the distinction, and is in my opinion more reliable than the Wassermann. Syphilis is a rarefying disease but

not a destructive one. True you may have destruction produced by the functioning of the joint when the bones have been rendered soft by the rarefying process. The usual thing is to be able to make out the complete outline of the bone, and to see the rarefied structure. On the other hand tuberculosis is from the start a destructive process, the bone gradually undergoing a molecular death with an accompanying obliteration of the joint.

Just how much benefit will result from the antisyphilitic treatment in syphilitic joints in children is not known. Personally I have never observed a case that has in any way been improved by heroic treatment. We of course know that the periosteal and shaft involvement frequently shows marked improvement and much work needs still to be done to attempt improvement by specific treatment of the joint cases.

In conclusion I would like to urge, first, careful consideration of joint conditions in children; second, not to be in a hurry to make a diagnosis, and third, the treatment, if there is a bone involvement, follows the natural mechanical principles of weakened structures, viz: support and protection.

## The Chancre

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This paper will be devoted to the discussion of the histopathology of the chancre based upon the microscopic examination of fifteen excised Hunterian lesions.

A modification of the Levaditi silver impregnation method was used to demonstrate the treponemata pallidæ in the tissues. Hæmotoxalin Eosin, Van Giesen, and elastic fiber stain were employed to show cell relation.

A careful study of one mature chancre will reveal all the changes which take place from the time that the treponemum first gains entrance into the mucous surface until it disappears from the primary site. In this same chancre will be found all the basic principles of syphilitic pathology occurring in any other part of the body whether it be aortitis or hepatitis. So closely does the pathology of a syphilitic lesion of the aorta resemble that of a chancre that it is impossible in many instances to tell them apart were it not for the elastic tissue fibers. The treponemata pallidæ are as numerous in the one as in the other.

It is a well known fact that the T. P. has a special predilection for the mucous membrane. By its own motility it enters an injured place, in these parts burrows down between the epithelial cells until it reaches the lymph spaces in the prickle cell layer, where the best anærobic conditions are obtained, and then begins to multiply. For some time it causes little if any disturbance, calling forth only a few leucocytes with which it lives in apparent harmony. In a few days the vanguard of its enemies appear, the small lymphocyte and the T. P. immediately moves outward and inward as it is never found where lymphocytes exist in any numbers. The lymphocyte infiltration becomes heavier until the epithelial cells above break down, and we have an open lesion. The lymphocytes are in turn replaced by large mononuclear leucocytes, and move our farther showing the T. P. in all directions from them. The large mononuclear leucocytes are in turn replaced by young connective tissue fibers. We now have at the farthest border of the chancre the treponemata pallidæ, next a band of small lymphocytes, then a band of large mononuclear leucocytes, and lastly connective tissue fibers. Of course these bands overlap a little at their junction, but the treponemata keep absolutely free from these other conditions and can not be found where any of these other changes have taken place. The induration of the Hunterian chancre is due to these changes.

The migration of the T. P. are in two directions, the great mass of them follow up the lymphatic channels involving each lymph node in turn until they reach the lymph nodes of the groins. From there on they gain entrance into the blood stream through the thoracic duct. The changes that take place from this point on are not in the scope of this paper. But while the main body of the T. P. have traveled the lymphatic way there are groups which break off from the main body early in the history of the lesion and pursue an entirely different course. These settle in the perivascular lymph spaces, pierce the blood vessel walls and gain entrance to the blood stream direct, are carried to different areas of the body, especially the skin, where they re-enact the same drama again, and we have the papular eruption of syphilis. These blood vessels suffer because of this invasion, and their resentment is shown by perivascular cell infiltration, thickened arterial walls and endarteritis. The old

scar of a chancre will retain these evidences of injury years after the lesion has healed. Thus it can be seen that a description of the pathological changes which take place in a chancre is a description of the changes which take place in any syphilitic changes, cell infiltration of the different types, connective tissue formation, endarteritis, periarteritis, giant cells and the production of gummas. The reason that the T. P. cannot be found in old syphilitic processes is because we examine for the presence of these organisms long after they have died or migrated to other parts.

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## Significance and Treatment of Hematamesis

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In the vast majority of cases, hematemesis indicates eosophageal varices, due to disease of the liver or spleen, or cancer of the stomach, or peptic ulcer. Some of the rare causes are:

(1) Poisons, such as arsenic, phosphorus, corrosive sublimate, carbolic acid, etc.

(2) Constitutional diseases; scurvy, hemophilia, Bright's disease, and those diseases of the bile ducts associated with jaundice.

(3) Specific fevers: Yellow fever, small pox, measles and influenza.

Occasionally patients that had been free from stomach symptoms vomit blood within a day or two following abdominal operations. The cause of the hemorrhage in such cases is supposed to be an injury to the omentum, but rupture of a small vessel in the gastric mucosa from vomiting and retching caused by the anesthetic seems a plausible explanation for some of these cases.

The difficulty in the diagnosis of the cause of gastric hemorrhage is indicated by the rather voluminous literature on the significance of such factors as appendicitis and cholecystitis, "Exulceratio simplex" Dieulafoy, the gastrostaxis of Hale White, and cases of severe hematemesis without an intrinsic lesion in the stomach. According to Eusterman[1] "two per cent of appendix cases and about five per cent of gall bladder cases with *marked reflex gastric symptoms* (italics mine) give a history of previous bleeding." Without a post-mortem examination to exclude an ulcer, such statistics are of little value.

Hematemesis in severe toxic cases, like appendicitis and cholecystitis, is attributed by Dieulafoy to simple erosions of the gastric mucosa. Excepting in highly toxic states, when hemorrhage may occur from any mucous membrane, Dieulafoy's erosion should not be seriously considered as a cause of gastric hemorrhage.

Hale White reported twenty-nine cases of gastric hemorrhage in young girls without any lesion in the stomach, and called the condition gastrostaxis.

There are a number of case reports in the literature of hematemesis without an intrinsic lesion of the stomach. Most of these reports are by surgeons who formed their conclusions from inspection and palpation, without even opening the stomach to inspect the mucous membrane.

Moschowitz[2] reports four cases operated on in one month for severe hemorrhage and no lesion was found. In three of the cases he says: "Exclusion of ulcer must be with a certain amount of mental reservation." The fourth case was a child three and one-half years old and the "spleen was felt one inch below the costal arch." These findings are suspicious of von Jaksch's anemia.

Varices in the lower end of the esophagus, due either to cirrhosis of the liver or splenic anemia, are not an uncommon cause for hemorrhage, and a laparotomy will naturally not reveal the cause of the bleeding. Even at autopsy on such cases Preble says the opening in the vein may not be found unless the vessel is distended with air or water.

The difficulty in excluding an acute ulcer after the stomach is opened is indicated by the following statement by W. J. Mayo[3]: "Acute ulcer does not always show on the outer wall of the stomach, and the diagnosis may be clinical. Well marked symptoms, including hemorrhage, may exist, and yet a prolonged search of the gastric interior might be necessary in order to detect the lesion. Patients have bled to death from an ulcer so minute as to be discernible only with a lens at post mortem." This statement by Dr. Mayo should encourage surgeons to merely say that no lesion was found instead of concluding that no lesion was present.

It is evident that cases of hematemesis are pre-eminently within the province of the internist.

In the treatment of severe hematemesis the first aim is to stop the bleeding. Measures to prevent recurrences can be considered later.

Although the amount of blood lost may be considerable, often four to six pints, and

the hemorrhage may not stop for three or four days, the bleeding is seldom fatal. Excepting patients with cirrhosis of the liver, I have seen only one patient die from hematemesis. Reliable statistics show that nearly all patients recover temporarily, with or without treatment.

The mortality rate with the medical treatment by Mansell Moullin and Bramwell, quoted by Deaver,[4] appears to be approximately correct. Moullin, in 153 cases of hematemesis in young girls, had only one death, and Bramwell in about the same number of cases experienced a mortality of 3 per cent. Most experienced surgeons contend that operation is indicated only in "certain cases." Moynihan states that only 3 per cent of cases are amenable to surgical relief. A patient that is almost exsanguinated is a poor surgical risk and the bleeding vessel is seldom found. Surgery should be limited to cases with recurrent hemorrhage, and the small number of these requiring surgery are better diagnosed without an exploratory incision.

The tendency being towards recovery, as coagulability of the blood increases while the hemorrhage continues, the effects attributed to the action of drugs may be questioned. However, the following measures are advised as the most rational treatment of sudden, profuse gastric hemorrhage:

(1) No food by the mouth for forty-eight hours. Water, one ounce every half hour. Water may also be given by proctoclysis or by hypodermoclysis. Ice by the mouth may be harmful by exciting peristalsis of the stomach.

(2) Codein, gr. 1, or morphine, gr. ⅙, hypodermically if necessary for restlessness or fright.

(3) Adrenalin chloride 1:1000 solution, one drachm in two or three times as much water, every hour or two for two or three doses. It should not be given hypodermically.

(4) Silver nitrate, gr. ¼, in one drachm of peppermint water every three hours for four doses. This, as all remedies, should be given immediately after vomiting.

(5) Alkalies are extremely important to protect the thrombus in the bleeding vessel from the digestive properties of the gastric juice. A powder containing 20 grains of sodium bicarbonate, three grains of magnesium oxide and five grains of bismuth subnitrate should be given every hour, day and night, for forty-eight hours.

(6) Coagulen, a powder prepared from blood platelets, may be given by the mouth in doses of one to two ounces of a 10 per cent solution.

(7) Lavage is indicated only when there is marked distention of the stomach, as the gagging due to introduction of the stomach tube may be harmful.

(8) Blood transfusion if the blood pressure drops to 80, or if the hemoglobin drops to 25, or if the hemorrhage continues in spite of other measures. In cases of emergency, a healthy blood relative can be used as a donor without tests for hemolysis or agglutination.

### MEASURES TO PREVENT RECURRENCES

This depends largely on the correct diagnosis of the etiology of the hemorrhage. When the hemorrhage is due to a ruptured vein in the lower end of the esophagus, due to disease of the liver or spleen, medical treatment is futile while surgery may be applied in certain cases. When the bleeding is due to a gastric or duodenal ulcer, or to an erosion of the mucous membrane, which is usually an acute ulcer, if the rational medical treatment is given there need be little fear of a recurrent hemorrhage. Surgical indications in recurrent hemorrhages from the stomach are limited to two conditions:

First—Splenic anemia. When a young adult, with an absence of stomach symptoms, gives a history of repeated gastric hemorrhages, has a secondary type of anemia and an enlarged spleen, a diagnosis of splenic anemia is justifiable. For this condition splenectomy is the recognized treatment, and the results are fairly good, even after the development of ascites due to Banti's cirrhosis.

Second—Cirrhosis of the liver is not an infrequent cause of severe, recurrent hemorrhages from the stomach. In the recognition of this disease, a history of alcohol and an enlarged spleen are essential. W. J. Mayo has removed the spleen in six cases of cirrhosis, with one death and apparently good results in the other five. One object of the operation is to divert the blood from the splenic artery to the general circulation, as the usual cause for hemorrhage in these cases is esophageal varices, the result of increased pressure in the portal vein, splenectomy would seem to be rational therapy.

In peptic ulcer, recurrent hemorrhages are due to the corrosive action of the gastric juice. The relief obtained by gastroenterostomy in such cases is undoubtedly due to the lessening of the acidity, estimated by Patterson as thirty points, but the acidity can be easily and completely

controlled by alkalies and frequent feedings without subjecting the patient to the dangers of a major operation.

Probably on account of withholding food by the mouth for a few days, gastric hemorrhage is not an infrequent complication of gastroenterostomy for ulcer. According to Balfour,[5] 12.7 per cent of the patients operated on for duodenal ulcer that gave a history of bleeding before the operation, reported bleeding after the operation. Five years ago Lichty[6] made the observation in a number of ulcer cases, that alarming hemorrhages occurred immediately on withholding food by the mouth. In 1901 Lenhartz advised feeding by the mouth immediately as the best treatment for a bleeding ulcer, but he did not recognize the importance of frequent feedings or of alkalies.

For forty-eight hours following a severe hemorrhage it is best not to excite peristalsis by any kind of food. The acidity can be controlled by alkalies given every hour day and night. On the third day milk and cream, one ounce of each every hour from 7 A.M. until 9 P.M. The alkaline powder midway between feedings, and three powders thirty minutes apart after the last feeding. After a few days the diet may be gradually increased, but hourly feedings and alkalies midway between must be kept up for eight to twelve weeks. Following the plan advised by Sippy, clinical experience proves quite conclusively that the Sippy treatment, if properly given, is the only rational treatment for bleeding ulcer, as well as for all types of peptic ulcer, acute or chronic, obstructive or non-obstructive.

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## Salvarsanized Serum Introduced Directly Within the Cranium

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The purpose of this essay is to discuss the subject appearing in the title, and report in abstracted form two illustrative cases treated at the Bell Memorial Hospital. The space alloted demands brevity. For a fuller account of this subject-material I would suggest that those particularly interested request a reprint of the "Treatment and Study of Twelve Nonparetic Neurosyphilitics Treated by Intraventricular Injections of Salvarsanized Serum" by A. L. Skoog and Karl A. Menninger, published in Journal of Nervous and Mental Diseases, Vol. 50, No. 2, August, 1919.

During the past few years particular interest has been manifested in investigating syphilis, especially in the diagnosis and therapy in which neurologists have had a full share. Our diagnostic skill has been greatly increased by the Wassermann test, and examinations of the cerebrospinal fluid, particularly considering the pleocytosis, goldsol, and globulin tests, and the fluid pressure. During this same period we have shared in the fruits of Ehrlich's exhaustive researches which endeavored to find a compound of arsenic which would destroy to a maximum degree the spirochæta pallida and yet not exert a too toxic influence upon the patient treated. As a result the profession is quite well acquainted with salvarsan and neosalvarsan. A number of laboratories have been working with arsenic, trying to discover improved synthetic chemicals. Thus far none has been found to replace the two chemicals mentioned.

The men versed in the special peculiarities respecting the anatomy and physiology of the central nervous system, learn to use a considerable amount of caution when introducing any irritating chemical substance within the ventricles or sub-arachnoidean spaces of the brain and spinal cord. It has occurred to investigators that some germicide might be introduced directly within the ventricles or sub-arachnoidean spaces for special treatment of syphilis of the central nervous system in all its various stages. A few years ago Swift and Ellis reported a new method of introducing serum into the spinal canal, salvarsanized in vivo. At the time this was quite enthusiastically received. Since then a number of objections have been raised, and it is not used as extensively as formerly. Salvarsan and neosalvarsan have been introduced directly into the sub-arachnoidean space, but on account of the extreme sensitiveness of its linings only extremely small quantities, or highly diluted, can be used. Thus, the quantity of

the drug used is so small that the possible therapeutic value may be questioned.

During the past three years in conjunction with Dr. Curran, of the ophthalmological department at the University of Kansas Medical School, some special experimental work has been attempted in the treatment of the metaluetic disorders of the central nervous system, and particularly those with optic nerve atrophies. About two years ago Dr. Karl A. Menninger, then an interne on my service at the Kansas City General Hospital, treated twelve cases of late syphilis of the central nervous system, by means of salvarsanized serum, introduced into the ventricles. Some interesting results were obtained by this careful study.

The technique will be briefly outlined as follows: First, it seems hardly necessary to state that a careful neurological examination, including appropriate laboratory tests, should be made. The patient may be given salvarsan 0.3 to 0.6 grams by the usual intravenous method. For this treatment as large a dose as a patient will tolerate should be given. Thirty to sixty minutes following this treatment the patient should have removed from 80 to 300 c.c. of blood. The blood should be allowed to stand over night at the room temperature; then the serum is pipetted off or decanted off and inactivated for forty minutes at a temperature of 57 deg. C. It is preferable to have this serum clear; if a few red cells are present there is no objection. It seems hardly necessary to state that all of this procedure should be carried out under rigid aseptic conditions. Twenty-four or forty-eight hours after the treatment is begun, the patient is taken to the operating room, where under a local anesthetic a small trephine opening is made. Several points may be selected. Our choice is one which will permit the needle to be introduced into the posterior horn of the right ventracle in a right-handed subject. Hair is removed by shaving over a small area. A local anesthetic of 1 per cent apothesine introduced along the line of incision by means of a hypodermic needle will render all the tissues sufficiently anesthetic so that little or no pain is experienced. A 3 cm. incision is made directed downward and lateral from a point about 5 cm. posterior to the Rolandic area line and about 10 cm. from the middle line. As a rule all hemorrhage can be fully controlled by traction with two hooked retractors. The periosteum is incised and separated from the bone. A small button of bone is then removed by means of the trephine. The needle is directed downward and slightly forward and inward. If the ventricular fluid does not flow readily, suction may be applied by using a glass syringe. As much ventricular fluid as possible should be removed. From 10 to 50 c.c. of the serum is now introduced slowly by means of a glass syringe. If the ventricle can not be readily entered, or no cerebral fluid obtained, the serum, in smaller quantities, may be introduced into the sub-arachnoidean space by means of a specially bent needle.

It has been found, on a whole, that the seroums are less irritating to the ventricular cavity, compared with the sub-arachnoidean space of the spinal cord. However, in many cases a considerable amount of reaction follows. I believe this to be due to a toxic ependymitis, choroiditis and meningitis. As a rule this lasts but a few days; in some cases it is almost entirely wanting. Evidences of this reaction are indicated by an increase of the temperature, pulse and respiratory rate, headaches, nausea and vomiting. In tabetics the lightning pains are often increased for a day or two following the treatment.

Case 1. This illustrates a case of well developed tabes with an almost complete optic atrophy, treated by the intra-ventricular method. He was an intelligent mechanic, 37 years old. His impaired vision began two years ago. At the time of treatment he had only a little light perception remaining. His ataxic gait and lightning pains were first noted eight months before the treatment. Much headache had been present. He did not give a history of an initial lesion. He had a marked Rhomberg, with patellar and Achilles reflexes absent. Before this treatment he had received six salvarsan injections. In October, 1918, he received his first intra-ventricular salvarsanized serum treatment. Subsequent treatments through the same original trephine opening were given at weekly intervals. In June, 1919, he reappeared for an examination, and showed a great deal of improvement, excepting regarding his vision, which had remained stationery. Three more treatments were given him at this time. His reactions following each of the seven treatments were mild. He was always able to be up and about in two or three days.

The results in this case indicate that had he been given this same treatment at the time of the earliest manifestation of the optic atrophy, an almost complete preven-

tion of his impaired vision might have been hoped for. Certainly all of his tabetic manifestations were much reduced. It should be borne in mind that neural fibers in the central nervous system can never regenerate after once being destroyed. The same law holds for the optic nerve, in that it is not strictly speaking a nerve but a projected portion of the central nervous system.

Case 2. This case illustrates one treated by the cerebral sub-arachnoidean method. This patient had been seen and treated carefully at Bell Memorial Hospital, by Dr. Ockerblad of the department of syphilology and Dr. Curran of the opthalmological department. The patient was a railroad man, aged 37. He gave a history of having had a chancre seventeen years ago; some secondaries were manifested. He received prompt treatment for two months with mercury and iodide. When appearing in March, 1919, he suffered from a paralysis of the left eyelid, stating that this had been gradually occurring over a period of six months. Dr. Curran reported in his examination of January, 1919, that there was a complete paralysis of the left third, fourth and sixth cranial nerves. The left ptosis was complete. The pupils were irregular and there was very feeble light reaction. The Wassermanns on blood and spinal fluid were three plus. In August, when I first saw the patient, the eye condition was about the same as previously reported. The neurological examination resulted in the diagnosis of a late syphilitic cerebritis and meningitis. The patient was in a poor physical condition. In September, 1919, the patient was given four treatments with salvarsanized serum introduced into the sub-arachnoidean space. From 10 to 20 c.c. of the serum was introduced each time. This patient made a rapid improvement under this line of treatment in every way. His physical improvement was marked, his nervous manifestations greatly decreased, and his ptosis largely clearing up.

In conclusion I wish to recount a few of the interesting facts obtained by the work reported by Dr. Menninger and myself. In the twelve cases which we reported, four were vascular types of cerebral syphilis, two tabes dorsalis, one idiot, two tabo-paresis and five unclassified neuro-syphilis. The clinical results of the treatment showed a marked improvement in two cases, slight in six, and none in two; there was a fatality in two cases. Most of these cases were in extremis. The laboratory showed, as a result of the treatments, that the Wassermann changed in the blood serum in 50 per cent, in the spinal fluid in 50 per cent, and the cerebral fluid in 80 per cent. The goldsol in the spinal fluid was diminished in 40 per cent and intensified in 30 per cent; and irregular in the cerebral fluids. This work indicates that there are striking differences, comparing the spinal and cerebral fluids in cases of neuro-syphilis. If any differences are manifested in the healthy state it has not been ascertained. The Wassermann reaction was different in six cases and agreed in six. The globulin was dissimilar in six and similar in five cases. The cells were always dissimilar. The goldsol reactions were dissimilar in eight cases and similar in four. This would indicate a possible interference in the channels of communication between the ventricles and sub-arachnoidean space of the spinal cord.

———B———

## Obstruction of the Common Bile Duct

MERVIN T. SUDLER, M.D.

Professor of Surgery, University of Kansas School of Medicine, Rosedale, Kansas.

The surgical treatment of diseases of the biliary tract now attracts a great deal of attention at the hands of the profession; and in spite of the great advance and the large number of operations done for the relief of this condition, the results are not uniformly as good as desired. This is a region difficult of access; manipulation is productive of shock and interference with the heart action; and the mortality, even in the most skillful hands in the country, is sufficiently high to emphasize its seriousness.

The most common cause of obstruction is stone, which has been very thoroughly and frequently discussed. There are practically three types of organic obstruction: (1) cancer, (2) cicatricial obstruction, and (3) spasmodic contracture of the muscles of Oddi (*Richter*: Surgery, Gynecology, and Obstetrics, Nov., 1917).

Curious as it may seem, carcinomatous degeneration of a duodenal ulcer is practically unknown; while malignant degeneration of ulcer of the stomach is fairly common. The characteristic symptom of cancerous obstruction of the ampulla of Vater is a gradually deepening jaundice without pain. Strangely enough, in these cases the biliary salts act to prevent the coagulation of blood and the danger of slow hemorrhage from the capillaries is

acute. Cicatricial obstruction is excessively rare; and since it is so rare, I wish to report the following case.

Patient, male, white, age 58, admitted to the hospital March 13, 1919, the diagnosis being obstruction of the common bile duct. Upon admission, the chief complaint was a dull aching pain in the pit of the stomach. The patient was badly jaundiced and his appetite was poor, but there was no constipation.

His difficulty began following an attack of influenza, five months previous to his admission to the hospital. At this time he was confined to his bed for six days. During the attack the patient had one chill, but there were no severe cramps. He states that he had a dull pain in the pit of the stomach three weeks before the onset of the influenza. The pain in the stomach subsided for a few days following the attack of influenza, but returned, and was accompanied by jaundice.

On January 11 he was operated upon in his home town for gallstones. The gall bladder was opened, but no stones were found. A drain was inserted. Following this operation the jaundice cleared up partially, though never entirely. It returned about a month and a half previous to his admission to the hospital, or about six weeks following the operation, at which time the wound had stopped draining. He had no serious trouble for a month; then he had a chill, accompanied by a severe abdominal cramp. This attack lasted for two hours, and was relieved by morphine. Following the attack, he vomited.

On April 3 the abdomen was opened by a Bevan incision. The common duct was found so large that it easily admitted the index finger. The gall bladder and duct were filled with mucus. The intestine and the ducts were carefully palpated, but no tumor or stone could be found. Apparently the duct had simply closed. An opening was made into the duodenum and the ampulla felt between the thumb and index finger. An anastomosis was then made. The line of suture was protected by having the omentum sewn around it. The gall bladder was opened, a purse-string suture was used so as to remove any tension on the other stitches, and a drainage tube was then inserted. The patient left the table in good condition.

On April 17 the patient was discharged from the hospital. At this time he was much less jaundiced, with bile showing in his stools. In October his physician reported him perfectly well.

In this instance there is absolutely no doubt of the obstruction; nor is there the slightest evidence of cholelithiasis at present or previously. It is therefore safe to assume that the obstruction was due to an inflammatory condition which resulted in stenosis. It is difficult to understand why an acute pancreatitis does not result in cases where the duct of Santorini is not present; especially when autopsies show that the most frequent cause of pancreatitis is an acute obstruction caused by cholelithiasis.

In regard to physiological obstruction: Its existence is purely speculative. Since we know that the bile remaining in the gall bladder often becomes thickened, that it may even contain a relatively large amount of mucus, and that its expulsion through the ducts produces colic pains very similar in character to obstruction caused by a gallstone or by spasmodic contracture of the muscle of Oddi, its differentiation would be very difficult. Reasoning by analogy, there is definite spasm of the pyloric muscle from hypersecretion in the stomach; and it is reasonable to suppose that under a somewhat similar condition in the gall bladder, there might be some spasm present in the muscle controlling the outlet.

———R———

## The Etiology of Influenza

H. ROSWELL WAHL, M.D.

of Kansas School of Medicine, Rosedale, Kansas.
Professor of Pathology and Bacteriology, University

In spite of the enormous volume of literature and exhaustive investigations on the recent epidemic of influenza, the microorganism causing this disease has not yet been identified. While some of the work done has been purposeless and, because of inadequate controls or overenthusiasm, has often served to confuse the problem, yet the past year has resulted in a distinct advance in our knowledge of the causative factors in influenza. On the other hand it has also shown how little we know of the underlying processes of this dreaded disease.

In 1892, towards the close of the previous great pandemic of influenza, Pfeiffer described an organism—the so-called bacillus influenzæ (also the Pfeiffer bacillus) which he believed to be the cause of the epidemic disease. Pfeiffer's view was not accepted by all investigators in Europe and, in fact, it was generally believed that he did not have sufficient evidence to substantiate his contention of the etiological

relationship of this organism. It was held by some that this organism caused the great pandemics and that the numerous small epidemics of so-called "grippe" were due to a variety of organisms. The matter was difficult to settle because of the absence of a great pandemic. However, the appearance of the pandemic of influenza in the fall of 1918 afforded an ideal opportunity for settling this controversy on the etiology of influenza. Unfortunately this work was necessarily handicapped by the disorganization of the medical and investigative forces of the country by the necessities of war and by the sudden and immediate call of the victims of the epidemic with its huge morbidity and shocking mortality.

Early in the epidemic the bulk of investigation consisted in determining the presence of B. influenzæ and other organisms in the respiratory passages of the patients. The first reports indicated a high percentage of positive influenza findings. In one instance it was 98 per cent. This was followed by a period in which conflicting reports were received not only from this country but from all parts of the world, some showing a high percentage of influenza bacilli and others a low percentage with the predominance of either the pneumococcus or the streptococcus or other organism. Even Pfeiffer himself had difficulty in finding his bacillus in the cases that he saw. Apparently the predominating organisms differed in different localities suggesting that they were secondary invaders. To some workers this difference was ascribed to faulty technic; and negative findings were discounted by them.

Following this period came improvement in the method of isolating and cultivating the organisms resulting in a marked increase in its incidence in most localities; and at present, most investigators concede that it is the predominating organism, but there is a marked difference of opinion concerning its role as the etiological agent in influenza. Its frequent occurrence in the lesions indicates either a primary or a secondary role, but does not necessarily imply a causative part in the disease. It is well known that this organism occurs frequently in the throats of healthy persons, both during and between epidemics, and also that it is frequently present in other diseases; for instance, in measles.

The evidence in favor of B. influenzæ being the cause of the disease is given below:

First—It is found in the respiratory passages more constantly than any other organism. Its presence in normal individuals and in other diseases is due to epidemic conditions whereby the existence of numerous carriers becomes inevitable. The mere presence of the organism is no proof of its etiological relationship any more than the presence of the bacillus of hog cholera implies that it is the cause. (The latter is due to a filterable virus.)

Second—The bacillus is toxic for animals with the production of lesions similar to those that occur in man. Formerly it was thought that laboratory animals were relatively insusceptible to it, but recent work has shown that some strains are very toxic for mice, rabbits, or guinea pigs, with lesions characteristic of influenza. Furthermore, the virulence may be increased by successive passage through animals. In rabbits a leucopenia is produced as in man.

Third—The influenza bacillus produces both an exotoxin and an endotoxin. The soluble toxin of some of the strains is very virulent and produces typical influenza lesions in the respiratory tract. Furthermore, rabbits may be immunized against this toxin with the production of an antitoxin that will protect another animal against either the toxin or the living organism of another strain. This toxin becomes more virulent if a pneumococcus or streptococcus be grown with the influenza bacillus. Injection of the toxin alone is apt to result in spontaneous secondary infections of the lungs with the pneumococcus or the streptococcus just as in man. Further evidence that the influenza bacillus produces a toxin is shown by the typical reactions following vaccination with the products of influenza bacilli. Some of the reactions resemble an abortive attack of the disease.

Fourth—The serum of influenza patients and convalescents contains specific immune bodies or antibodies against the influenza bacillus. These are in the nature of agglutinins, complement fixing bodies, and opsonins. Similar bodies are found in those who have taken the vaccine for influenza. Some workers contend that these serological reactions suffice to establish the etiological relationship of the influenza bacillus. However, inasmuch as this disease is characterized by so many secondary infections, such immune reactions should be interpreted with caution, because they only indicate an infection with the influenza bacillus, which may be a secondary process and have no bearing with the pri-

mary and underlying cause.

Those who do not accept B. influenzæ as the primary cause may be divided into three groups: (a) Those who are in doubt as to the nature of the organism; (b) those who believe that the disease is due to a filterable virus and that the influenza bacillus is only a secondary invader; and (c) those who believe either that the streptococcus or pneumococcus alone or in symbiosis with the influenza bacillus causes the disease. In addition there are a few who believe that the micrococcus catarrhalis and allied gram negative diplococci play an important role. The main objections to the Pfeiffer theory are as follows: (1) Influenza bacilli are not always found in the lesions and are found in healthy persons and in other diseases such as other respiratory infections, and in measles, a disease that simulates influenza in its acute onset, short incubation period, leucopenia, contagiousness and tendency towards pneumonic complications.

(b) The pathogenic action of the influenza bacillus on animals is not proven. Many workers have failed to produce death of inoculated animals except in symbiosis with other organisms or in massive doses. The subjective nature of so large a part of the influenza infection and the absence of any very specific character in the lesions in the respiratory tract renders the interpretation of the lesions in animals as specific for influenza difficult. It has been shown, however, that if the respiratory epithelium is first injured in some way, for example by exposure of the animal to poisonous gases such as chlorine or phosgene in low concentrations, the influenza bacillus then exerts a very pathogenic action with apparently characteristic lesions.

(c) The symptoms following the injection of the influenza vaccine does not necessarily imply a specific reaction, as it may be more of a protein reaction. This is supported by the fact that, in one series at least, there was no leucopenia such as occurs in influenza patients.

(d) The occurrence of antibodies in the sera of influenza patients and convalescents has received undue significance. Some investigators have failed to detect such bodies. In this connection it should be remembered that these substances are transitory in character, being present but a short time and disappearing early in convalescence. One worker found antibodies in the sera of influenza patients against a variety of organisms, in fact they were more constantly present for streptococci than for B. influenzæ. For example, complement fixing bodies were more frequent against a strain of the streptococcus (70 per cent) than against B. influenzæ (20 per cent). This was confirmed by another investigator. There is considerable variation between different strains of the influenza bacillus, some manifesting no reaction with the patient's sera.

As Park has pointed out, an epidemic strain is alike everywhere in cases arising in the epidemic, therefore the serum of an animal immunized against a particular strain should show antibodies for all other strains isolated from that epidemic as well as for the organism used for immunization. In other words, if the influenza bacillus is the cause of the recent epidemic, the serum of a rabbit immunized with one strain should react with all other strains isolated from the victims of the epidemic. If this does not occur, this organism cannot be considered the cause of the disease. About 100 strains isolated from various sources were tested in Park's laboratory with this object in view, but all were found to react differently, indicating that the bacilli were present before illness and that some other virus created conditions that allowed the latent bacilli to exert a pathogenic action; in other words, the influenza bacilli were secondary invaders.

The idea that influenza may be due to a filterable virus received impetus in the report of Nicolle and LeBailly who succeeded in producing the disease in man and monkey by inoculation with the filtered virus from the nasopharyngeal secretions. While suggestive, these experiments were inadequately controlled and are therefore inconclusive. Similar results were reported by some English observers (Gibson and Connor), but in the United States where they were attempted by several independent investigators, the results were uniformly negative.

Recently, British observers (Bradford, Bashford and Wilson) isolated from all of their influenza cases a minute, filterable, anærobic, coccoid organism, cultivated by Noguchi's method. It was found in the sputum, nasopharyngeal secretions and in the blood early in the disease. It could be passed through animals successively with characteristic lesions in the respiratory tract and the organisms could be isolated from the lesions in pure culture. These authors maintain that the disease is primarily a blood disease; that is, a bacteremia with localization of the lesions chiefly in the respiratory system. The or-

ganisms persist in the sputum and other excretions a considerable period. The use of this organism on human volunteers had not been attempted, but should give conclusive results.

Human experimentation has been carried on by a number of observers, but with disappointing results. The use of filtrates of the sputum and nasopharyngeal secretions of influenza patients failed to produce the disease in the hands of McCoy, Nuzum, Wahl and Rosenau.

Wahl, White and Lyall sprayed filtrates of pneumonic lesions of fatal cases of influenza in the nares and nasopharynx of several volunteers, with negative results. They also used heavy emulsions of young living influenza bacilli in the same manner without the production of any illness or any abnormal change except the addition of influenza bacilli to the nasopharyngeal bacterial flora. These organisms were isolated from their throats for several weeks after the inoculation. None of these men showed a leucopenia. One of the strains used was just obtained from a fatal case of influenza and should have been virulent. None of the men had had influenza.

Rosenau performed a more thorough series of experiments on human volunteers but with equally negative results. In spite of using almost every method conceivable to propagate the disease under apparently very favorable conditions, he failed. He had at his disposal 100 volunteers, none of whom had influenza, and carried out the following sets of experiments:

(a) Insufflation of living influenza bacilli in the nasopharynx and nares of nineteen volunteers.

(b) Direct transference of the nasopharyngeal virus and secretions to ten men. A portion was filtered before use.

(c) Intravenous injection of the patients' blood.

(d) Transference of freshly inoculated swabs of many patients to nineteen volunteers.

(e) Direct exposure of each of ten volunteers to the breath and respiratory discharges of each of ten selected patients, allowing the latter to cough in their faces.

Such strikingly negative results make the search for the causative organism discouraging. Apparently some other factor, unknown at present, plays a part. It may be that the volunteers were insusceptible, but it is strange that all of these men, chosen largely because they were apparently susceptible, should prove to be uniformly highly resistant. Such results as these just noted emphasize the need of conservatism in the interpretation of animal, bacteriological and immunological experiments. It is unfortunate that in these experiments Rosenau did not include a series to show the effect of using soiled eating utensils of the patients, which Cummings emphasizes as a very important mode of transmission of the disease.

———R———

**Chlorinated Highballs for Polish Soldiers**

The beverage with which the A. E. F. was long familiar, the "chlorinated highball," will soon be extensively drunk by the Polish troops under Generals Pilsudski and Haller. But it isn't as intoxicating as it sounds, for it doesn't come out of a cask or a bottle or even a little stone jug. It comes out of a waterproof fabric bag with faucets around the bottom, known to the soldiers as the doughboy's life-saver, and to medical men as the Lyster bag. Slow evaporation through the canvas, when the bag is hung out of doors, keeps the water cool, and a tube of calcium hypochlorite broken into it makes it safe for drinking.

Last summer the Polish army called upon the American Red Cross for assistance in improving health conditions in its camps and military centers. Purification of drinking water is something that has never before been practiced in the Polish army. The troops were dependent upon whatever natural watter supply was at hand and were thus exposed to infection. As a first step in starting health improvements, the Red Cross pointed out the advantages of the Lyster bag, and following their suggestion Polish chemists made tests of its action and indorsed it highly.

As a result the Minister of Health ordered 20,000 of these bags, together with the necessary ampules, for use in army camps, and at civilian refugee centers.

———R———

**Influenza**

What he considers as a unique case of epilepsy or epileptiform convulsions following a severe attack of influenza in a child, two years old, is reported by L. P. Clark, New York (Journal A. M. A., December 6, 1919). Both grand mal and petit mal attacks occurred almost daily for two weeks. The occurrence of dentition seemed to render the convulsions more severe, and mental development was retarded, temporarily. At present the attacks are less frequent and of the petit mal type, and the child is improving under hygienic, dietetic and moral treatment.

**THE JOURNAL**
*of The*
**Kansas Medical Society**

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## Goin' On Twenty

This number completes the nineteenth volume of the Journal. At its birth it was a sorry infant. Apparently it had neither father or mother, but like Topsy it "just growed." For the first two years of its life it had not even a nurse to look after its care and needs, but in some way it survived and at the end of its second year some benevolent friends took pity on it. It was clothed in fine raiment, was carefully and wholesomely nourished and in a few short years had grown into a promising youth.

Its existence was still precarious, however, for the state society journal idea was not very deeply rooted at that time. It had to meet much opposition and strong competition. But once well rooted the idea began to grow and at this time the state society journals are in the ascendency and it is the independent journal whose existence is precarious.

As one of the pioneers in this particular field the Journal may be proud of the fact that it is now one of thirty state society journals that are making a creditable showing for themselves and have practically revolutionized the ethics of medical journalism.

We realize that there is much room for improvement in the Journal and plans are already made for features that will add to its interest and value. As soon as the paper market will justify it will be enlarged, but in the meantime the material will have to be crowded into the smallest possible space.

One of the things the Journal most lacks is co-operation by the secretaries of county societies. It should have a column of news items each month—items about the members of the Society, including deaths, marriages, removals, etc.—but in order to have such a column the secretaries must send in the items.

We should have several columns each month from the Medical School giving the members something in regard to the work going on there. This we hope to have during the coming year.

There are other things the Journal should have and should do. Some of them will appear during the next year and others will appear as conditions permit.

Since this is its last appearance before the holiday season the Journal wishes you all and all yours a Merry Christmas and a Happy New Year.

## A Medical-School Number

Most of this issue is filled with contributions from members of the faculty of the clinical school at Rosedale. It is essentially a Medical School number. We hope that every member of the Society will read these papers. We hope you will read them because they are well worth reading, and also because from these papers you will get a better idea of what the medical school is doing in medicine.

The school is entitled to the co-operation and support of every member of the Society. With your hearty co-operation it will grow in importance both to the profession and the people. Whatever you do for it now will be well repaid in the benefits which all will derive from a high class medical school and the progress in medicine which such an institution stands for.

### Larger and Better Societies

Has your society enough members to justify its existence as a society? If all the eligible men in your county were members would your society be large enough to have regular meetings and regular programs? These are questions that deserve consideration.

If your society is a small one and there are enough eligible men in your county to make it a large and active organization, why are these men not members? If with all the eligible men in the county your society would still be too small to be of much importance or of much interest, why not combine with a neighboring county, or with two counties, or a half dozen counties, and have a *real* society, one you will be glad to be a member of, one that will have meetings every month and programs that are worth while, and one to which every physician in the territory will wish to belong?

There can be no doubt that such organizations would show much greater activity and would total a much larger membership than would several small societies occupying the same territory. It is not necessary that the counties so combined shall be in the same councilor district. Rather should the convenience of railroad connections with available meeting places be the determining factor.

———R———

### Errata

In the article on "Post Operative Use of Radiant Heat" by Dr. L. A. Sutter, which appeared in the November number, the word *fermentation* occurring in the fourth and twelfth lines in the second column on page 265 should be *fomentation.*

———R———

Dr. Wilbur A. Baker, formerly serologist for the Public Health Service and pathologist for the Kansas University at Rosedale, is now associated with the Risdon-Sterrett Clinic at Leavenworth.

———R———

It has been hinted to us that the Council and officers of the State Society are to be entertained by the Wyandotte County Society at their annual meeting in January. The Wyandottes are a spirited and energetic lot of fellows who know how to entertain themselves and their friends. They have a good society and are rather proud of it.

———R———

## MEDICAL SCHOOL NEWS

### Reopening of Public Health Laboratory at University of Kansas, Rosedale

Through the combined efforts and financial sacrifices of the Medical School of the University of Kansas and the U. S. Public Health Service, the Public Health Laboratory for the prevention of venereal disease has been reopened.

From the first of the year the laboratory will be prepared to run Wassermann tests and to examine urethral smears, free of charge. Any doctor in the state wishing such work done will, upon application, be furnished with sterile containers and mailing cases for blood samples.

In order for the laboratory to be of service both to the doctors and the people of the state, and at the same time furnish statistics for the Public Health Service of the incidence of venereal disease in the state, it will be necessary for all cases to be reported to the office of the Public Health at Topeka by the doctors.

D. R. BLACK, M.D., Director.

### To the Alumni of the Medical School of the University of Kansas

It will be of interest to all the alumni of the Medical School of the University of Kansas, either by virtue of direct graduation or having graduated from one of the various schools which consolidated to form the present Medical School of the University of Kansas, to know that a permanent alumni association has been formed.

Prior to the date set for a permanent organization, letters were sent to all alumni whose names and addresses were at hand. These letters urged all members to come to the meeting on November 26, 1919, at the University Club, Kansas City, Missouri, and help put the association on a sound footing. Many members responded and we had a very successful session. The following officers were elected:

President, Dr. C. B. Francisco, Kansas City, Mo.

Vice Presidents—Dr. Thomas Hyatt, Topeka, Kan.; Dr. J. P. Kanokey, Kansas City, Mo.; Dr. D. W. Basham, Wichita, Kan.; Dr. G. M. Gray, Kansas City, Mo.

Secretary and Treasurer, Dr. D. R. Black, Bell Hospital, Rosedale, Kan.

Executive Committee—Dr. C. C. Nesselrode, Kansas City, Mo.; Dr. J. M. Frankenburger, Kansas City, Mo.; Dr. Rex L. Dively, Kansas City, Mo.; Dr. R. W. Holbrook, Kansas City, Mo.; Dr. J. L. Myers, Kansas City, Mo.

The purposes for which the organization will work are the following:

1. To help our alma mater through the present difficulty.

2. To make the graduates of all the consolidated schools feel that they have a common parentage in the University of Kansas.

3. To establish an annual homecoming week at the Medical School where clinics may be held and interesting subjects discussed by various members.

4. To assume a personal interest in the future development and progress of the school.

In the very near future circular letters will be sent to all the members whose names and addresses are at hand, urging them to join and help to make the Alumni Association a real success.

All of us know that a university can be no stronger than its alumni, so it is up to all to get into the harness and put our alma mater on the map.

Unfortunately a complete list of the graduates with proper addresses is not available, so if you fail to receive a letter, send in your name, address, date of graduation, and from which school, and enclose $1 for annual dues for 1920.

D. R. BLACK, Sec'y & Treas.,
Bell Hospital, Rosedale, Kan.

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| American Crushed Rock Company | 50.00 |
| Frisco Elevators | 50.00 |
| Zip Manufacturing Company | 50.00 |
| Gerner & Slater | 50.00 |
| James Carroll | 50.00 |
| Robert Carroll | 50.00 |
| L. V. Williams | 50.00 |
| Baptist Ladies' Aid Society | 50.00 |
| P. J. Goulding | 50.00 |
| J. P. Jensen | 50.00 |
| J. M. Killmer | 50.00 |
| Samuel and P. Clasen | 50.00 |
| Dr. Stewart | 50.00 |
| George Holsinger | 20.00 |
| Mr. and Mrs. George Rushton | 20.00 |
| Troop 4, Boy Scouts | 20.00 |
| S. T. Roush | 15.00 |
| Frieda Kampschmidt | 15.00 |
| L. M. Smith | 15.00 |
| Dr. P. J. O'Connell | 15.00 |
| Mrs. C. E. Sanders | 15.00 |
| A. H. Ebert | 10.00 |
| Rev. W. D. Kelley | 10.00 |
| Rev. I. P. Frazier | 10.00 |
| Rev. J. E. Scheer | 10.00 |
| E. C. Holt | 10.00 |
| Myers Bakery | 10.00 |
| Hans Prinds | 10.00 |
| Mrs. George Rushton, Sr. | 10.00 |
| Mrs. Don Carlos Guffy | 10.00 |
| Neal Dabney | 10.00 |
| George Gerner | 10.00 |
| Mrs. B. L. Stine | 10.00 |
| George Maddox | 10.00 |

| | |
|---|---|
| Luther Leavengood | 5.00 |
| Mrs. Myrtle M. Wright | 5.00 |
| Mothers' Club, Columbian School | 5.00 |
| R. W. Long | 5.00 |
| H. M. Withers | 5.00 |
| Louis Helmreich | 10.00 |
| Miss Mary Callahan | 5.00 |
| Edith Mathias | 5.00 |
| Edna Jones | 5.00 |
| Mrs. H. H. Brooks | 5.00 |
| Mrs. S. R. Williamson | 5.00 |
| Joe Trabon | 5.00 |
| Earl S. Warner | 5.00 |
| Sidney Williamson | 5.00 |
| Verne Holt | 5.00 |
| Wilburn Smith | 5.00 |
| Phillip Cessna | 5.00 |
| Dr. C. E. Sanders | 5.00 |
| George Stanley | 5.00 |
| Rev. J. E. Scheer | 5.00 |
| ——— McElheney | 5.00 |
| I. O. O. F. No. 477 | 5.00 |
| A. J. Poor | 50.00 |
| Columbian School | 25.00 |
| Shuff & Campbell | 25.00 |
| J. V. Preston | 25.00 |
| Bertha Byerley | 25.00 |
| H. Chilton | 25.00 |
| L. M. Myers | 25.00 |
| Mrs. G. W. McNatt | 25.00 |
| Kyte Bros.' Grocery | 25.00 |
| Davidson Manufacturing Company | 25.00 |
| W. P. Lambertson | 25.00 |
| Adolph Strasser | 25.00 |
| R. W. Ducan | 25.00 |
| L. R. Gates | 25.00 |
| H. H. Brooks | 25.00 |
| W. L. Vance | 25.00 |
| Mrs. H. P. Myers | 25.00 |
| Mrs. D. D. Miller | 25.00 |
| Sam Brooks | 25.00 |
| Mrs. George E. Rose | 25.00 |
| Gladys Harding | 25.00 |
| Mrs. M. E. Mann | 25.00 |
| Edna Holsinger | 25.00 |
| S. R. Williamson | 25.00 |
| Roy Vance | 25.00 |
| Blanche Stockton | 25.00 |
| Benjamin Barnett | 25.00 |
| McMurray Construction Company | 25.00 |
| C. J. Johnson | 25.00 |
| William C. Lunt | 25.00 |
| J. B. Dentler | 25.00 |
| H. C. Alwes | 25.00 |
| Security State Bank | 250.00 |
| Don Carlos Guffey | 250.00 |
| Thomas G. Orr | 100.00 |
| O. J. Cunningham | 100.00 |
| Dr. D. R. Black | 100.00 |
| Dr. O. J. Cunningham | 100.00 |
| Dr. Howard Marchbanks | 100.00 |
| Drs. Colt & Colt | 100.00 |
| Dr. W. A. Myers | 50.00 |
| Dr. Frank L. Abbey | 50.00 |
| Dr. J. Milton Singleton | 25.00 |
| Dr. L. A. Lynch | 25.00 |
| John B. Smith | 25.00 |
| Whitmore School | 17.40 |
| G. L. Baughman | 10.00 |
| Martha A. Thompson | 10.00 |
| V. F. Boor | 10.00 |
| Elmer E. Liggett | 10.00 |
| W. H. Stalmaker | 5.00 |
| Dr. H. S. Butler | 5.00 |
| Walter Bryant | 2.00 |
| J. W. Skaggs | 1.00 |
| Total | $9,415.40 |

In order that the facilities of the hospital and dispensary may be developed to the highest point and used to the best advantage, a committee of the faculty have been appointed to make a comparative study, according to the standards of the American Medical Association. The committee is now at work on this important matter of seeing just what can be done to bring this work in absolute correlation with these standards.

It is very gratifying to note the loyalty of the alumni of the institution at this time. It is understood that a number of them have subscribed $50 and $100 and other such sums for the purchase of the necessary land for the building of the new hospital. Their list is not yet ready for publication.

———E———

## Fables for the Kansas Doctor

By RENNIG ADE

Once upon a time there was a Kansas doctor who dispensed his own medicines. He was very trusting and believed implicitly what the veteran drug salesman, aged 24, told him concerning the therapeutic qualities of the products he sold. He would sit in rapt wonder and astonishment while the aforesaid salesman graphically recited the results obtained by Dr. Squint of Rustic Center, Arkansas, in the treatment of two cases of tonsillitis with the Bilacatone Serum. It never occurred to him to doubt the scientific source of the case reports, nor to perceive the commercial acumen of the manufacturers. He always bought a good supply of the serums, vaccines, etc., and was continually looking for a case to fit his last purchase. In buying his medicines he used better judgment and made it a rule to purchase proprietaries the name of which suggested the use for which they were intended. For instance, Rheumaxitone was good for rheumatism, Cascarhea obviously would produce free catharsis, Stomatone would cure all diseases of the stomach, etc. Sometimes he would forget the therapeutic uses of a five-gallon lot and then would have to wait until the drug salesman came around and enlightened him.

On one occasion he made the mistake of giving Liquor Erectum to an elderly gentleman who was suffering from hemorrhoids, an error that might easily occur as the letter E had been torn off the label. The terrible mistake was discovered early

the next morning by the hired girl when she called him for breakfast. Fortunately only one dose had been taken. However, so potent was this formula, the old gentleman, who had been suffering also with *glandular interstitialis indifferentia,* was immediately restored to pristine vigor and when last heard from was traveling for a millinery house out of St. Louis.

Some of the compounds he bought took on fearful and wonderful changes. A nice green tonic would settle down over night into a muddy colored mixture and he could then appreciate what the salesman had meant when he had called it a *stable* preparation. Sedimentation and fermentation vied with each other for supremacy in the drug room and the pop of flying corks attested the fierceness of the conflict. A modest office girl who was reaching for a bottle on a high shelf was struck in a vital spot by a cork out of the Elixir Sedative bottle which was standing on the floor, and was only influenced to withdraw a damage suit after much persuasion.

At another time a revenue officer climbed on the roof and sniffed the better part of the night at a broken window in the office. He always invoiced this stuff as *drugs and fixtures* and almost succeeded in unloading it one time on a doctor from South Carolina who was looking for a location for his wife's mother's kidneys. He would probably have gotten by if he had not attempted to slip in a static X-ray machine and a nebulizer. The prospective purchaser took fright at this and left town on the first train. Later on the doctor succeeded in giving the static machine to the high school and received favorable mention in both the town papers as a result.

The nebulizer was shuffled from pillar to post and ultimately became the property of two little girls who used it in their play house for a fire extinguisher. His granules and pills became weather-bleached and hardened and could have been used over and over if some method had been perfected to save them. He was oftimes surprised and embarrassed to have some thrifty patient bring back a dozen of the pills that had been taken strictly according to directions and request a rebate on his account. Frequently these were the friable pills that the salesman had easily crushed between his thumb and forefinger. Later when he bought a half interest in the drug store on the corner the doctor's drugs were moved behind the prescription case. The sounds and speculum were arranged alongside the operating chair, the latter being used for wall paper customers, and the fixtures were thrown into the cellar.

The doctor soon learned to practice medicine more successfully by closely observing his partner, the druggist, who had been practicing on the sly for twenty years. He learned that it didn't take much mental effort to wrap up a bottle of Hostetter's Bitters for a tonic, especially when the patient knew what he wanted.

He also learned that a bottle of lemon extract could be sold at 40 cents cash and more profit made than on a sixteen-ounce bottle of White Liniment that was never paid for. He learned to wrap up the wormy glycerrhiza quickly and only sold it to old people whose eyesight was poor. He became accustomed to handling money and complained every time he put the 1-cent government tax to one side when he made a soft drink sale. This only left him a 14-cent profit on each 17-cent transaction and as a result he was getting prejudiced against the government. The Sympathetic Society of Non-Bathers who made his store their headquarters agreed with him that something ought to be done. Thus gradually the doctor got on a firm financial basis. The banker slapped him on the back more often, but the little boys and girls with the big trusting eyes seemed to pay no attention to him any more.

Moral.—Poverty and credulity are not without reward.

## SOCIETY NOTES

### SHAWNEE COUNTY SOCIETY

The annual meeting of the Shawnee County Society was held at the Elk's Club on Monday evening, December 1. The old custom of having a real banquet on the occasion of the annual meeting was revived.

As the clock struck seven the doors of the banquet room were thrown open and the members and their guests were promptly seated. One hundred and twenty-three plates were served.

Between the first and second courses the society was called to order by the president, Dr. F. L. Loveland, and the following officers were elected: President, W. M. Mills; vice president, A. K. Owen; secretary, E. G. Brown; treasurer, L. H. Munn; member board of censors, W. E. McVey.

Beautiful roses and delicious candy were provided for the ladies, and cigars and cigarettes for the gentlemen. At 8:30 the society adjourned to the Grand Opera House where seats had been provided to

witness a comic opera production. Fortunately all had been well fed and were in a charitable mood.

WYANDOTTE COUNTY SOCIETY

The Wyandotte County Society met at Carnegie Library, Kansas City, Tuesday evening, November 18.

A paper was read by Dr. Robert A. Davis on "Points in Treatment of Epidemic Cerebro Spinal Meningitis."

MEADE-SEWARD COUNTIES SOCIETY

The Councillor of the Twelfth District, Dr. W. F. Fee, issued a call to the doctors of Meade and Seward counties to appear at his office in the city of Meade for the purpose of organizing a medical society. Dr. Fee read a letter from the president of the State Medical Society urging that he organize one, or more than one, as he deemed best, in the Twelfth District. After some preliminary work Dr. Fee was called to the telephone and, from what I could understand from the conversation, it was a call to refreshments, for Dr. Fee in his most amiable way invited us to follow him, which we did. Landing at his beautiful residence, we were introduced to his wife and daughters and then ushered into the dining room, where we were served so well I have forgotten the number of courses, but I do know that the table was loaded with everything that a person could wish. All present admitted this to be one of the best feeds they had ever attended. Many thanks to Mrs. Fee and her charming daughters, and I assure them they will never be forgotten by anyone present. After dinner we returned to the office of Dr. Fee and resumed business. The first being the election of officers for the remainder of 1919 and the coming year 1920. Dr. A. L. Knisley was chosen president; Dr. A. M. Morrow, vice president, and Dr. J. W. Messersmith, secretary-treasurer, all of Liberal, Kansas. Dr. Knisley gave a nice talk on some of his experiences while in the army, which was very interesting and instructive. Drs. F. W. Huddleston, George A. Nickleson, C. B. Lesley, A. M. Morrow and W. F. Fee also gave some very interesting talks. A motion was made by Dr. Lesley that all of the old members of these two counties be elected members of this society, and the motion carried. Dr. J. C. Roab, of Fowler, and Dr. George S. Smith, of Liberal, were unable to attend. This society shall be known as the Meade-Seward Counties Society. After spending the evening in a most pleasant manner they decided to meet in the city of Liberal some time during the holidays.

J. W. MESSERSMITH, Sec'y-Treas.

DECATUR-NORTON COUNTY SOCIETY

The Decatur-Norton County Society met in Norton on November 25 at the Commercial Club rooms. The following program had been prepared for this meeting:

"Some of My Experiences in the A. E. F. in France," H. O. Hardesty, Jennings.

"Treatment of Empyema," F. D. Kennedy, Norton.

"The Sanatorium Treatment of Pulmonary Tuberculosis," J. A. Milligan, chairman Advisory Commission, State Sanatorium for Tuberculosis, Garnett.

"Cholecystectomy vs. Cholecystostomy," Wm. C. Lathrop, Norton.

ınfluenza," S. J. Crumbine, secretary State Board of Health, Topeka.

"When Should the Tonsils Be Enucleated?" J. L. Shewmaker, Phillipsburg.

"Hyperthyroidism," F. H. Smith, Goodland.

Round table.

General discussion followed each paper.

## DEATHS

Dr. T. F. Foncannon, aged 63, died at his home in Emporia November 20, of Bright's disease. He had been totally disabled, being unable to leave his room for three or four years.

Thomas Franklin Foncannon was born in Montgomery, Indiana, March 15, 1856, graduated from the Louisville Medical College, Louisville, Kentucky, in 1878. He located in Emporia in 1884 and has practiced medicine until disabled by illness. He was for many years an active and energetic member of the Society.

Dr. J. J. Kackley, aged 93, died at the home of his daughter in Chetopa, November 4, 1919. John Jefferson Kackley was born November 18, 1826, in Muskingum County, Ohio. He graduated in medicine from what is now Washington University Medical School in 1871. He moved to Chetopa in 1874 and practiced medicine there until forced by advancing years to retire.

Dr. Lemuel Stephen Coplan, Wellington, Kansas, aged 51, died in Chicago, November 17, from atrophic cirrhosis of the liver. Dr. Coplan was a captain in the Medical Corps of the army and was honorably discharged December 12, 1918. He graduated from the University of Illinois Medical School in 1897.

Dr. Samuel Phillips, Leavenworth, Kansas, aged 89, died in St. John's Hospital, Leavenworth, October 31. He graduated from the University of Maryland, Baltimore, in 1853. He was at one time a surgeon in the army.

Dr. James Welch, Tampa, Kansas, aged 50, died suddenly at his office, October 16, from heart disease. He was a graduate of the College of Physicians and Surgeons, Kansas City, in 1903. He was a veteran of the Spanish-American War and was commissioned a first lieutenant, M. C. U. S. Army, in the recent war. Was member of the Kansas Medical Society.

Dr. George M. Bower, aged 82, died at his home in Lenexa, recently. He graduated from Bellevue Hospital Medical College in 1862 and practiced medicine until 1906 when he became a banker. He was a state senator in 1872-73.

Dr. Robert I. Fletcher, aged 87, died at the home of his son in Arma, Kansas, September 25, from cerebral hemorrhage. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1857. He was a surgeon of the U. S. Volunteers during the Civil War.

Dr. Richard W. Lease, Redfield, Kansas, aged 68, died November 9. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1878. He was a member of the Kansas Medical Society.

## BOOKS

**The Surgical Clinics of Chicago**

Volume 3, Number 5 (October, 1919). Octavo of 258 pages, 91 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published bi-monthly. Price, per year, paper, $10; cloth, $14.

The October number of the Surgical Clinics of Chicago meets ones greatest expectations. There are in this number clinics by Eisendrath, Kellogg Speed, Oliver and Culbertson at Cook County Hospital; clinics by A. D. Bevan, Bevan and Gill, Gatewood, McWhorter, Kretchsmer, Herbst and Davis at the Presbyterian Hospital; clinics by Major Potts and Major Montgomery at the U. S. A. General Hospital at Fort Sheridan; a clinic by A. J. Ochsner at Augustana Hospital; one by Watkins at St. Luke's Hospital, and one by Cornell at the Chicago Lying-In Hospital.

It is a very interesting collection of cases, many of them belonging to the unusual class. The procedures are described with definite precision and the illustrations are excellent.

## "Flu" Precautions by Armour & Co.

The medical department of Armour & Company has taken precautions among plant employes against a return of the "flu" epidemic in Chicago and other cities where the Armour plants are located.

All employes have been notified that without charge they may have the influenza vaccine administered according to the formula of Dr. E. C. Rosenow.

In addition to offering this vaccine free to employes, a general educational campaign along health lines and particularly with reference to the "flu" is being carried on among the workers in the plant.

Dr. Volney S. Cheney, medical director of Armour & Company, reports that the employes are taking an interest in the campaign and that as a result no serious recurrence of influenza is looked for among the Armour workers.

## Can Diphtheria Mortality be Reduced?

Despite the fact that diphtheria antitoxin is practically a specific, one out of ten cases of diphtheria terminates in death.

Why this high death rate?

Two reasons: Tardiness in the use of diphtheria antitoxin, and the employment of too small doses. The average dose of diphtheria antitoxin at the present time is 5,000 units. Authorities maintain that it should be 10,000 units.

Physicians who get the best results from diphtheria antitoxin use large doses early in the course of the disease. They administer initial injections of ten to twenty thousand units in all suspected cases. There is little danger from over-dosage of antitoxin. This fact is generally conceded. The real danger lies in the employment of too small doses.

Biological manufacturers are turning out serum of higher potency than formerly. Newer methods of refinement and concentration have resulted in a better product. The antitoxin produced by Parke Davis & Company at the present time is three to five times as concentrated as the antitoxin supplied several years ago. Physicians readily recognize the advantages of Parke Davis & Company's refined and concentrated high-potency diphtheria antitoxin. There is less serum to inject, absorption is more prompt, and the results are quicker and better.

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Very truly yours,

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A. L. LUDWICK, A.M., M.D., Asst. Supt.
EDITH GLASSCOCK, B.S.
Business Manager

Office 910 Rialto Bldg., Kansas City, Mo.

### Exfoliative Dermatitis

H. A. Jones, Howard, R. I. (Journal A. M. A., November 1, 1919), reports a case of exfoliative dermatitis following treatment with arsphenamin. The face, hands and feet were worst affected. The condition ended in gangrene, caused by obstruction of the dorsalis pedis artery, assumed to be due to arsenical deposition and not to the specific disease treated.

## WANTED, FOR SALE, ETC.

THE KANSAS CLEARING HOUSE for physicians, dentists and druggists wants all those desiring to change location, trade or exchange properties or positions, to send in a short, concise statement of the position wanted, thing to be exchanged or traded. Your name will be registered and your letter filed without charge. If you knew where to find it, something good awaits you. We find it for you. Write it now. Address The Kansas Clearing House, Clay Center, Kan.

FOR SALE—White enamel operating chair-table and a Betz wall plate with rectifier and several dollars' worth of instrumental attachments, all in good working condition; $25 secures the lot. Address 717½ N. Broadway, Pittsburg, Kansas.

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# ASTHMA

Its treatment with

**BENZYL BENZOATE**

See "Southern Medical Journal," July, 1919, page 370

"Case 4—Mrs. G., 30 years old. She has been suffering for several years with very acute attacks of asthma, which were not relieved by adrenalin and required morphin injections several times. The patient was given 20 drops of 20 per cent solution of benzyl benzoate four times a day and was improved more than by any other treatment. The blood examination showed 15 per cent of eosinophiles."

**DYSMENORRHEA AND OTHER COLICS**

See "The Journal" A.M.A., August 23, 1919, pages 599 and 601

Solution of

**BENZYL BENZOATE MISCIBLE, H. W. & D.**

Each 5 minims represent 1 minim of Benzyl Benzoate

Palatable when mixed with a liberal amount of water or a smaller quantity of milk and sweetened.

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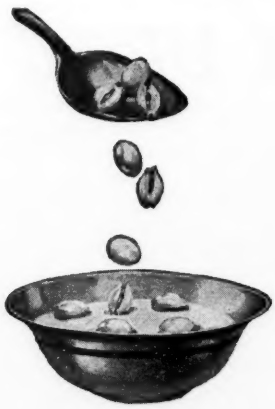

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By Prof. Anderson's process, the bit of moisture in each food cell is changed to steam. Then more than 100 million steam explosions are caused in every kernel.

Puffed Rice is whole rice puffed in like way. Corn Puffs is pellets of hominy puffed.

These are considered the best-cooked cereal foods in existence and best fitted to digest.

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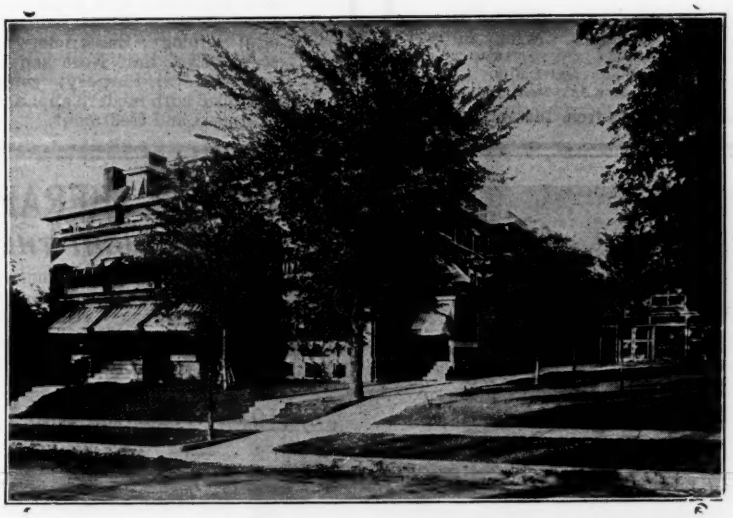

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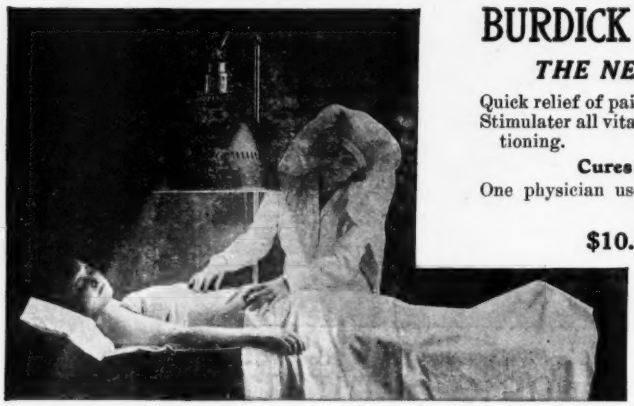

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